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| 09/888,641      | 06/26/2001  | Hiroyuki Nitta       | 500.40285X00        | 9093             |

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ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-9889

EXAMINER

LANEAU, RONALD

ART UNIT PAPER NUMBER

2674

DATE MAILED: 12/17/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/888,641

Applicant(s)

NITTA ET AL.

Examiner

Ronald Laneau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 3,5,9,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 4,6-8 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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***Response to Amendment***

1. The amendment filed on 9/15/03 has been entered. Claims 1 and 2 are canceled and claims 3-19 are now pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, line 8, applicant discloses "... , in which **display region many of motion** frame picture ..." is vague and indefinite.

Correction is required.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 3, 5, 9, 10, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshihara et al (2002/0000960).

As per claims 3, 9, and 10, Yoshihara et al teach a liquid crystal display for executing a display corresponding to display data to be inputted from the outside, comprising: a liquid crystal panel (21), a light source (22) for illuminating said liquid crystal panel, a controlling circuit having a light-emitting region of the back light divided into at least two light-emitting regions and relationships in ratio of light-emitting period of time in comparison of the numbers of division with the case where a light-emitting region of the back light 22 has been divided versus the case where no division has been carried out are shown in table 1 and with increase in the number of division for light-emitting region if the back light 22, a light period of time for each light-emitting region during a period for each sub-frame decreases (page 6, [0071], [0072]).

As per claims 5 and 13, Yoshihara et al teach a liquid crystal display wherein the respective pixels are in an undisplayed state (ratio in extinguishing light of the back light 22 is 0 % as claimed (page 6, [0070])).

***Allowable Subject Matter***

7. Claims 4, 6-8, 12, and 14-19 are allowed.

None of the references, either singularly or in combination, teaches or even suggests:

As per claim 4, a liquid crystal display apparatus wherein said time having said 1<sup>st</sup> light-emission luminance is longer than said time having 2<sup>nd</sup> light-emission luminance, said controlling circuit controlling said time ratio of said 1<sup>st</sup> light-emission luminance in said period to be 50 %

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or smaller when said display data is a motion-frame picture, and to be 50 % or larger when said display data is a freeze-frame picture.

As per claims 6-8, a liquid crystal display apparatus wherein said controlling circuit comprises:

a data storing unit for storing said display data by the amount of at least 1 frame,

a data comparing unit for comparing corresponding pixels between said display data stored in said data storing unit and said display data to be inputted, and

a pulse controlling unit for outputting a signal in correspondence with a comparison result by said data comparing unit, said signal controlling said time ratio of said 1<sup>st</sup> light-emission luminance in said period.

As per claim 12, a liquid crystal display apparatus wherein said controlling circuit outputs a signal so that a time-period of said 2<sup>nd</sup> light-emission luminance will start immediately after a writing of said display data in a region has been terminated, said signal indicating said starting time and a time-period of said 1<sup>st</sup> light-emission luminance, said display data being varied most in said region among respective display regions on said liquid crystal panel, said respective display regions corresponding to said plurality of light sources.

As per claims 14 and 15, A liquid crystal display apparatus for executing a display corresponding to display data to be inputted from the outside, comprising: a tone controlling circuit for updating a set value in at least 1 specified tone position in accordance with said luminance distribution data, and for determining a tone characteristic between said updated respective set values on a 1-frame basis with the use of a predetermined arithmetic-calculation formula.

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As per claims 16-19, A liquid crystal display apparatus for executing a display corresponding to display data to be inputted from the outside, comprising: a luminance distribution detection controlling circuit for detecting, in accordance with said image data to be inputted, luminance distribution data by the amount of at least 1 frame of said image data, and

a light-source controlling circuit for controlling at either of a light –emission time-period and a light-emission time of said light-source in accordance with said luminance distribution data.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6.00 PM or via email: [ronald.laneau@uspto.gov](mailto:ronald.laneau@uspto.gov).

9. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

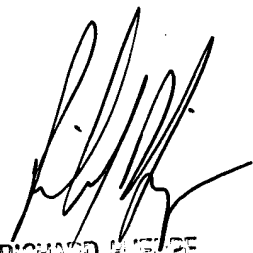
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ronald Laneau  
Examiner  
Art Unit 2674

rl  
December 12, 2003



RICHARD HUELPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600